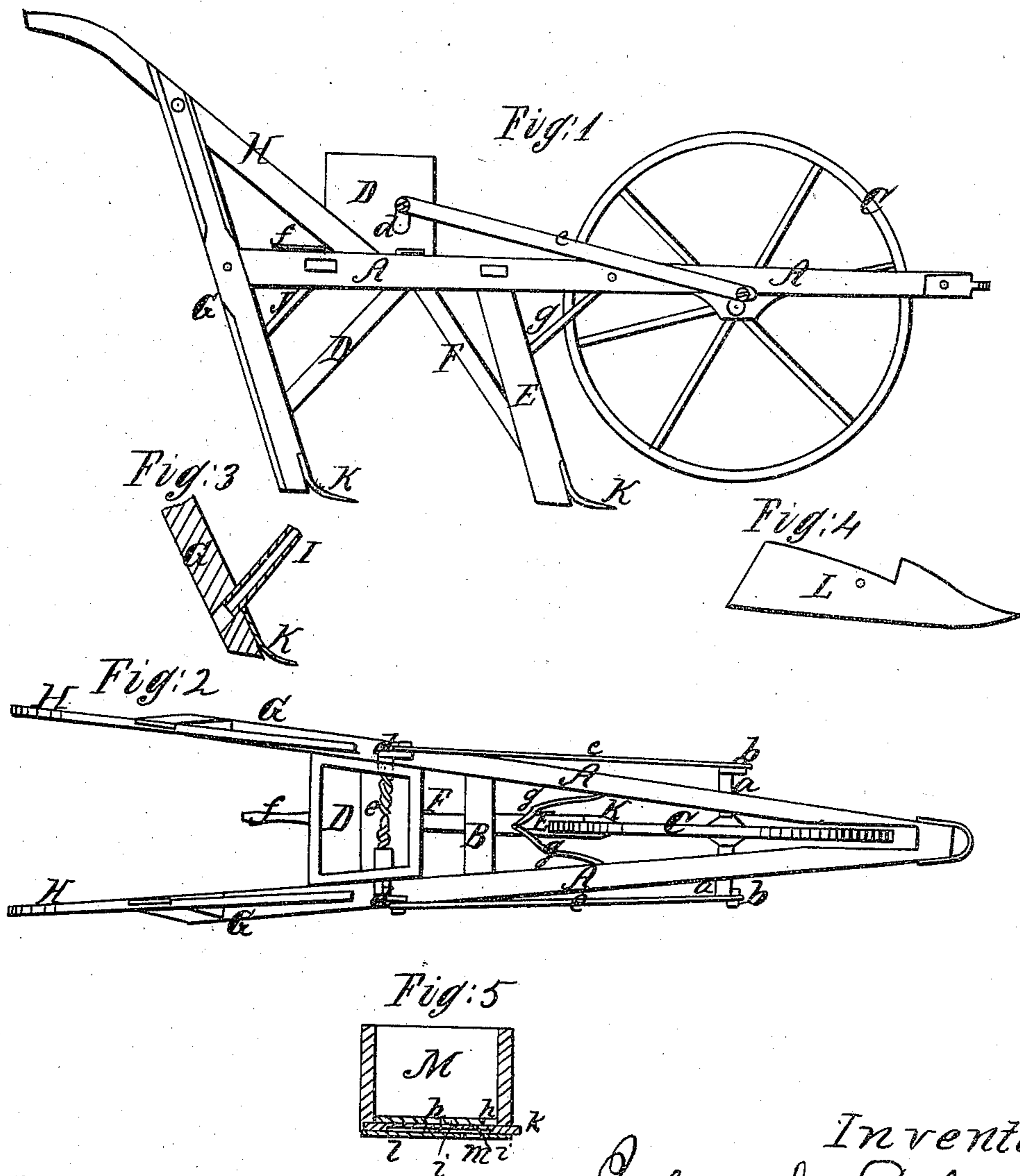


Sater & Barnes.

Seed Planter.

N^o 87,712.

Patented Mar. 9, 1869.



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United States Patent Office.

JOHN D. SATER AND TURNER BARNS, OF GREENSBURG, INDIANA.

Letters Patent No. 87,712, dated March 9, 1869.

IMPROVEMENT IN GRAIN-DRILLS AND CORN-DROPPERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that we, JOHN D. SATER and TURNER BARNS, of Greensburg, in the county of Decatur, and in the State of Indiana, have invented certain new and useful Improvements in Combined Grain-Drill and Corn-Dropper; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of our invention consists in the construction and general arrangement of a "grain-drill and corn-dropper combined," which can be used for either purpose, with slight change.

In order to enable others skilled in the art to which our invention appertains, to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation of the grain-drill;

Figure 2, a plan view of the same;

Figure 3, a side section, showing the outlet for the seed;

Figure 4, side view of the corn-plow; and

Figure 5, a vertical cross-section of the corn-dropper.

A A represent two beams, joined together at one end, where the team is attached, and separating at the rear end a suitable distance.

At a proper point, a cross-bar, B, connects the two side-beams A A.

Between the side-beams, and as far forward as possible, the driving-wheel C is placed, the shaft *a*, on which said wheel is placed, having its bearings in suitable journal-boxes on or under the side-beams.

The ends of the shaft *a*, on the outside of the side-beams, are provided with cranks *b b*, which, by means of rods or bars *c c*, connect with cranks *d d* on the ends of the auger *e* in the seed-box D.

The seed-box D is placed at a suitable point on the side-beams A A, and has three holes, or apertures in its bottom, which openings may be regulated by a slide having a lever, *f*, extending in rear of the seed-box.

The agitator in the seed-box consists of an auger, *e*, the twist of which commences at the centre, and goes toward the ends, as seen in fig. 2.

By the arrangement of the two cranks, a continuous rotary motion is obtained for the auger-agitator, which is thus kept constantly revolving, preventing the seed from clogging the openings in the bottom of the seed-box.

From the centre of the cross-bar B, an inclined bar, E, extends downward. The inclination of the bar E is slightly toward the front, and the said bar is braced by metal braces, *g g*, extending upward to the side-beams A A.

A tube, F, leads from the centre opening in the bottom of the seed-box to the rear of the foot of the bar E, where the said tube opens, discharging the seed, which escapes through the centre aperture in the bottom of the seed-box D.

At the rear ends of the side-beams A A are placed other bars, G G, having the same inclination as the

bar E, and extending a suitable distance both above and below the side-beams.

To the upper ends of the bars G G, the handles H H are secured, said handles extending downward and forward, and secured to the side-beams A A.

Tubes, I I, lead from the side-openings in the bottom of the seed-box D, and pass through a slot or opening in the lower portion of the bars G G, as shown in fig. 3, so that the seed escaping through said tubes may be discharged in rear of the lower ends of said bars.

The bars G G are braced by metal braces J, as seen in fig. 1.

To the front side of the lower ends of the bars E and G G, the usual cultivator-teeth K K are attached.

When it is desired to use the machine as a corn-dropper, the corn-plow L, shown in fig. 4, is placed at the lower end of the bar E, over the cultivator-tooth K, and firmly secured to said bar.

The seed-box D is then removed, and the box M, shown in fig. 5, substituted.

This box has two apertures, *h h*, in its bottom, and under said bottom is placed a movable slide, *k*, also with two holes, *i i*, so arranged that when the slide *k* is moved to one side, one of the holes *i* is just beneath one of the apertures *h*, allowing one grain of corn to pass through and fall on to a metal plate, *l*, underneath said slide.

This metal plate *l* is provided with an opening, *m*, in which the upper end of the tube F fits.

When, now, the slide *k* is moved to the other side, the grain of corn deposited on the plate *l* falls down through the opening, *m*, and tube F, into the ground, and at the same time the other hole *i* in said slide comes under the other aperture *h* in the box, allowing another grain of corn to fall through these openings on to the plate *l*. This second grain of corn is, in its turn, deposited into the ground through the tube F, when the slide is moved forward again.

The slide *k* is provided with a lever, which extends on the side of the box M, and, by attaching the connecting-rod *c* to said lever, the necessary reciprocating motion is obtained for the slide.

Having thus fully described our invention,

What we claim as new, and desire to secure by Letters Patent, is—

1. In combination with the side-beams A A, wheel C, connecting-rods *c c*, bars E and G G, and tubes F and I I, the seed-box D, having an auger-agitator *e*, with a crank, *d*, at each end, and the feed regulated by a lever, *f*, in rear of the box, substantially as shown and described.

2. In combination with the side-beams A A, wheel C, connecting-rods *c c*, bar E, and tube F, the corn-plow L and box M, constructed as described, and for the purposes set forth.

In testimony that we claim the foregoing, we have hereunto set our hands, this 12th day of January, 1869.

JOHN D. SATER.
TURNER BARNS.

Witnesses:

JOHN F. WOODFILL,
E. L. FLOYD.